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## Patterns of Religious Attitude Shifts from College to Fourteen Years Later

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### I. INTRODUCTION

ARE there discernible patterns in shifts of students' religious attitudes from college to 14 years later? Do college attitudes toward religion tend to persist more than attitudes toward other values? Is there a significant relation between religious attitudes indicated on paper-pencil tests in college and overt behavior 14 years later? Do regional differences in attitudes tend to follow a pattern? May we expect to find consistency in shifting of belief in Deity as compared with attitudes toward the church or toward Sunday observance?

For such questions a longitudinal approach seems appropriate, in which subjects are tested in college and later retested by the same instruments. This is a report of such a study involving four religious areas. Initial testing was done in colleges and universities in 1936, and retest was made of identical subjects in 1950.

### II. PROCEDURE

#### *The Initial Study, 1936*

*Subjects* (Ss) for the original study consisted of 3,749 students who attended 18 colleges and universities in 1936. These

students were enrolled chiefly in liberal arts colleges of state universities and church-related colleges. Our Ss, 1,724 males and 2,025 females, were distributed over the four undergraduate classes from freshman to senior. The institutions included: four state universities, three located in the Midwest and one in the South; six Lutheran colleges; two colleges affiliated with the Society of Friends; and single institutions connected with each of the following denominations: Methodist, Presbyterian, Seventh Day Adventist, and United Brethren. Of the twelve denominational colleges, two are east of Chicago, one is in the South, and the others are in the Midwest (8).

*Scales* for measurement of student attitudes toward religion were selected from the Thurstone series: Attitudes Toward God (A Reality), Attitudes Toward God (Influence on Conduct), Attitudes Toward the Church, and Sunday Observance (9). Each of these scales has been calibrated by the method of equal-appearing intervals (10). Validity is based mainly upon internal consistency, self-ratings, and certain behavioral indices of religious attitudes. Reliability for each scale is .90 or better—all of which is based upon groups additional to the present Ss. For convenience in comparison, all scales were adjusted so that high scores indicate attitudes favorable toward

<sup>1</sup>Acknowledgment is made to all who have cooperated in this study, especially to Dr. D. A. Worcester, Dr. M. K. Walsh, Dr. L. L. Thurstone for original use of tests, Naida Nelson, and the University of South Carolina.

the religious value under consideration.

*Anonymity* in marking attitude scales is sometimes thought to be a factor in honesty of response (4). However, Ash (1) found that on political, economic, and racial issues his Ss were not biased either way by signing or not signing attitude questionnaires. Corey (3) likewise found anonymity unnecessary in attitude study.

In the present study, the following precautions were taken:

1. In both the 1936 and 1950 phases, subjects were encouraged to indicate attitudes frankly with or without signing.
2. In the 1936 study, it was made clear that the student's attitude could in no way affect his standing at his college since the unscored papers would be sent directly to the writer and held strictly confidential.
3. As an additional device, a supplementary test was added calling for attitudes toward the college or university then attended. Yet on this device to "test the test" the utmost freedom of response seems evident. In these institutions, signed expressions indicated attitudes no less antagonistic toward the college then attended than did those which were unsigned. If restraint in expression is felt anywhere, it should be expected when invited to indicate attitudes toward the institution then attended. Yet signing or nonsigning seemed unrelated to criticism of college or university (7).

### *The 1950 Follow-up*

*Subjects* for the 1950 follow-up had been reduced in number by death, hospitalization, and by their failure to keep alumni offices informed of rapidly changing addresses. By the time our attitude booklets were mailed, accurate current addresses had been reduced to 1,200. Of these 1,200 who had presumably received the 1950 test booklets, a total of 893 completed the tests and returned them in time for our calculations. Ex-student responses came from every state in the Union, from South Africa, Liberia, most countries of South America, Asia, and Europe. Occupationally, the 1950 respondents

included 65 ministers, 180 teachers, 198 business men and women, 37 physicians, and smaller numbers of authors of books, university professors, federal officials, enlisted men and officers, and one bartender. Of these 893 ex-students, 454 were females and 439 males.

A sampling question might be raised: are the 893 ex-students of 1950 representative of the 3,749 collegians of 1936? That the question is not crucial to the present study is seen from the fact that scores of the 893 ex-students are compared only with their own 1936 scores—not with the means for the larger group. All 1936 data have been recalculated on the basis of the identical 893 who responded in 1950. We shall present mean differences, 1936-50, and percentage of attitude shifts for these same 893 persons on the same tests after the 14 intervening years.

However, to evaluate the extent to which the 1950 group is representative of the larger 1936 population, two methods were employed:

1. Using one of the scales, the respondents of 1950 were found to differ only slightly from the means of the entire group when all were in college in 1936.
2. After nearly 800 booklets had been received in the fall of 1950, two mail "urgings" were sent out which brought 93 "stragglers" who responded after February 1, 1951. These were dated and marked for separate study. If these "stragglers" did not differ significantly from the early respondents, it might be assumed that the other 300 who failed to get our booklets or who neglected to return them would likewise not differ significantly. Comparisons were made between "stragglers" and early respondents in three ways: 1936 means, 1950 means, and 1936-50 changes. In none of the three ways did the "stragglers" differ significantly from the early respondents.

Thus, these two devices fail to indicate that selective factors could account for the test and retest results to be presented.

*Stability of scale values, concepts, and*

meaning of test items over the 14 years intervening between test and retest deserve consideration. It should be recalled that this study does not propose to compare the 1936 test results with those of a new generation of college students, but to measure changes in identical persons. However, to evaluate the extent to which item meanings and consequent item values might have changed for a new generation of students, the writer made a brief study in 1954. The scale, Attitudes Toward the Church, and Thurstone's judging techniques were employed. Fifty-one judges were secured from advanced students in educational psychology and measurement classes. Tabulations indicate slight shifts in value for 22 per cent of the items, the trend being slightly higher for some anti-religious items of the scale, but the degree of difference was not significant. On the scale, God, An Influence on Conduct, significant changes in scale values were found for less than 5 per cent of the items. (A 1952 study [2] using 60 volunteers from elementary psychology courses in California indicates somewhat greater changes in item values.) Even with a new generation of undergraduate students as judges, the change in item values is relatively small. With judges 14 years out of college, the changes in religious item meanings might be expected to be even less. Apparently, religious concepts possess marked stability.

### III. ATTITUDES TOWARD THE CHURCH

#### *Degree of Attitude Change After 14 Years*

It will be recalled that this scale, for both test and retest, has been revised so that data may be compared conveniently with the other religious areas. Hence, high scores, 8 to 11.0, indicate attitudes

strongly favorable to the church as expressed in such items as "I think the church is a divine institution, and it commands my highest loyalty and respect." Low scores in the area, .5 to 3.0, indicate strong antagonism, as typified in an item

TABLE 1  
ATTITUDES TOWARD THE CHURCH AMONG STUDENTS AT 16 COLLEGES AND UNIVERSITIES IN 1936, COMPARED WITH THOSE OF THE SAME SUBJECTS 14 YEARS LATER  
( $N=887$ )

1936		1950	
Score	<i>f</i>	Score	<i>f</i>
10	56	10	84
9	482	9	615
8	220	8	102
7	71	7	48
6	33	6	22
5	10	5	4
4	11	4	7
3	2	3	2
2	2	2	3
1		1	
Mean	8.90	Mean	9.20
SE	.04	SE	.034
Diff.			.30
<i>p</i>			.01
<i>r</i>			.38
Shifts		<i>N</i>	%
No shift		453	51
Toward church		308	35
Against church		126	14

such as "I have nothing but contempt for the church." For convenience, the data from the 39,000 marked items have been summarized in Table 1. The degree of attitude change from 1936 to 1950 may be inferred from the difference between the means for this group of 887 Ss. Both test and retest means indicate attitudes favorable toward the church, 8.9 and 9.2 respectively. The change in means from 1936 to 1950, .30, is significant at the .01 level and points to attitudes more favorable toward the church after the 14 post-college years.



### Attitude Shifts

But since differences in means may fail to show the full extent of actual change (shifts *toward* the church may be offset by shifts *against*), we have counted the number of Ss who in the 14 years did not shift by so much as one scale interval. It will be noted that 453, or more than 51 per cent of this group, remained in their original position (i.e., made an identical score) over the 14 years of added age, marked by war, marriage, and other personal and cultural changes. While one might expect some relation between paper-pencil tests in college and a later retest, that over half of the Ss should remain in the same class interval for so many years is surprising. Apparently attitudes toward the church expressed in college do tend to persist. Judging by percentage of Ss unchanged, attitudes toward the church showed significantly greater stability than any of the other attitude areas, even including attitudes toward God.

We found 126 Ss, or 14 per cent, whose 1950 attitudes were less favorable toward the church than in 1936. In contrast, there were 308 persons or 35 per cent who had shifted toward the church by one or more intervals. This is in accord with the significant change in means toward prochurch attitudes already noted.

Still another indication of the 1936-1950 attitude persistence is seen in the Pearson product-moment  $r$ , .38,  $SE$  .025. While some shifts in attitudes have been shown, the correlation between test and retest with 14 years intervening suggests educational implications. What a student believes in college can hardly be ignored or considered as of mere transient importance.

### Types of Institutions

That student attitudes toward the church differ among the various types of institutions has been shown in other studies (8). But do *changes* in attitudes over postcollege years also vary when we consider institutional grouping? For the sake of brevity, we classify the 16 institutions into 3 groups: the 4 state universities, the 6 Lutheran colleges, and a group of 6 other colleges affiliated with the following denominations: Methodist, Presbyterian, United Brethren, Adventist, and Friends.

As will be noted in Table 2, the type of institution showing greatest prochurch attitudes in 1936 was the Lutheran group, lowest mean scores were for the state universities, and the colleges of the "other" denominations were between these two. The differences between Lutheran and non-Lutheran denominational groups were not significant. Differences

TABLE 2  
ATTITUDES TOWARD THE CHURCH, BY TYPE OF INSTITUTION  
( $N=887$ )

Types of Institution	N	1936		1950		Diff.	$p$	No Shift (%)	Shift Pro Ch. (%)	Shift Anti Ch (%)
		Mean	SE	Mean	SE					
4 state univers.	190	8.55	.12	8.96	.09	.41	.01	46	41	13
6 Luth.	357	9.05	.05	9.34	.04	.29	.01	54	34	12
6 other	340	8.96	.06	9.18	.05	.22	.01	51	17	32

between state universities and the other two types were both significant. By 1950, the ex-students from all three groups of institutions had increased their mean scores by significant differences. While all three groups had become more favorable toward the church, the ex-students from state universities had come further than those from the other groups, but had not equaled either.

The percentage of "standpatters" was greatest (54 per cent) among Lutheran ex-students and least (46 per cent) among state universities. Of ex-students from state universities, 41 per cent shifted in the direction of greater favor toward the church, compared with 34 per cent and 17 per cent among Ss from the two denominational groupings.

#### *Regional Differences*

Significant regional differences in student attitudes were found in the 1936 phase of this study. Students enrolled in Southern colleges were more prochurch than those in the East and the Midwest. In spite of the wide dispersion of alumni and ex-students from all institutions (students from Midwestern institutions now residing in the South, New England, and the West), regional differences of 14 years earlier were still noticeable. Ex-students from Southern schools remained more prochurch than those from the North, but the magnitude of the differences had declined.

#### *The Sex Variable*

While in college in 1936, the usual pattern of sex differences was evident. On attitudes toward the church, the mean for women was .33 higher than for men. While women remained more prochurch than men 14 years later, the difference

in means had decreased to .14. In college, the sex difference was significant at the 1 per cent level. Fourteen years later the difference in means proved significant only at the 7 per cent level.

The means for both males and females changed in the direction of attitudes more favorable toward the church by differences significant at .01 levels. More women than men were "standpatters" (remained in the same scale interval on both test and retest), but more men shifted toward stronger prochurch attitudes.

#### *Attitudes Toward the Church and Overt Behavior*

That attitudes tend to persist for at least 14 years has been shown by the small differences in means on test and retest, by the 51 per cent of "standpatters," and by the test-retest correlation of .38. But may we expect college attitude scores to be related to overt behavior 14 years later? If prochurch attitudes indicated in tests in college tend to be translated into action, we should expect positive correlations between college attitude scores and such postcollege activities as church attendance and financial support of the church.

That college attitudes toward the church are related to church attendance 14 years later seems evident. Using the question, "Do you attend church most of the time?" we find a biserial  $r$  of .258,  $SE$  .04, between 1950 church attendance and college attitudes in 1936. While not large, this correlation is significantly greater than zero.

If attitudes are related to overt behavior, we might expect a relationship between prochurch views in college and the percentage of ex-students who 14

years later tithe—give to the church 10 per cent or more of their income. We find that 76 per cent of the tithers reporting in 1950 had been above the mean in attitudes toward the church while in college. Of those tithing in 1950, 31 per cent had been in the highest interval of the distribution while in college in 1936, 25 per cent of the tithers had been in the next highest interval and 16 per cent had been in the third interval.

#### IV. ATTITUDES TOWARD SUNDAY<sup>2</sup> OBSERVANCE

##### *Degree of Attitude Change*

We have seen that these 887 ex-students tend to shift toward more pro-church attitudes 14 years after the initial college tests. We now turn to attitude changes in regard to Sunday observance. Will a similar pattern obtain—significant shifts toward the more religious end of the continuum?

Test data have been summarized in Table 3 with low scores, 1-3, indicating strong antagonism toward Sabbath observance. At the upper end of the scale, scores 6 to 9 indicate attitudes strongly favorable toward Sunday observance.

The degree of attitude change from 1936 to 1950 may be inferred from the differences in the 14-year means. Both 1936 and 1950 means are in the neutral areas, 5.92 and 5.25. While small, this difference, .67, is significant at less than the .01 level. In contrast with the mean change toward prochurch attitudes, the significant change here is in the *opposite* direction, less favorable toward Sunday observance.

<sup>2</sup>Sunday and Sabbath were used interchangeably due to the fact that Ss included Seventh Day Adventists and Jewish students.

TABLE 3  
ATTITUDES TOWARD SUNDAY OBSERVANCE AMONG  
STUDENTS AT 16 COLLEGES AND UNIVERSITIES  
COMPARED WITH THOSE OF THE SUBJECTS  
14 YEARS LATER  
(*N* = 893)

1936		1950	
Score	<i>f</i>	Score	<i>f</i>
10		10	
9		9	
8	84	8	49
7	172	7	91
6	191	6	130
5	162	5	169
4	170	4	231
3	110	3	218
2	1	2	5
1	3	1	
Mean	5.92	Mean	5.25
<i>SE</i>	.05	<i>SE</i>	.05
Diff.....			.67
<i>p</i> .....			.01
<i>r</i> .....			.43
Shifts	<i>N</i>	<i>%</i>	
No shift.....	257	29	
Toward Sunday.....	174	19	
Against Sunday.....	462	52	

##### *Attitude Shifts*

But since means may fail to indicate actual change, shifts *for* observance *offset* by those against, we turn to the percentage of individual changes. Two hundred and fifty-seven Ss, 29 per cent of the entire group, did not change their attitudes toward Sunday observance by so much as one scale point. One hundred and seventy-four, 19 per cent, shifted to attitudes more pro-Sunday, while 462, 52 per cent, shifted toward attitudes less favorable to Sunday observance. Thus while the difference between means, 1936 to 1950, is small, there is marked contrast between percentages of student shifts, 52 per cent toward less Sunday observance with 19 per cent toward more.

The contrast in attitude-shifts between that toward the church and against Sun-



day observance may be summarized as follows:

	Church	Sunday Observance
Shifts toward	35%	19%
Shifts against	14%	52%

Two and one-half times as many ex-students shifted *toward* the church as *against* it. But two and one-half times as many ex-students shifted *against* Sunday observance as *toward* it. Perhaps the marked shift toward attitudes less favorable to Sunday observance may be related to social changes involving increased tolerance for nonreligious Sunday activities such as secular employment and commercial recreation. However, the intercorrelation between the two tests in 1950 remains positive and significant, .36, *SE* .023.

While significant shifts have been indicated, we find evidence of attitude persistence as shown in the test-retest correlation, .43, *SE* .03. It seems that attitudes measured in college are related to attitudes similarly tested 14 years later.

#### *Types of Institutions*

That institutional types differ in student attitudes toward Sunday observance is shown in Table 4. Students at denominational colleges in 1936 were significantly more favorable toward Sunday observance than were those at state univer-

sities. Fourteen years later ex-students from all three types of institutions had shifted toward attitudes less favorable to Sunday observance. While ex-students from state universities showed a smaller degree of change toward disapproval of Sunday observance, those from denominational colleges still remained slightly favorable toward Sunday. Compared with denominational ex-students, more individuals from state universities shifted toward Sunday observance and less shifted toward the antagonistic end of the scale.

#### *Regional Differences*

As seen by their attitudes toward the church, ex-students tend to retain the regional marks of their collegiate nurture. Those who attended institutions in the South continue more favorable toward Sunday observance than those from institutions in the Midwest and the East.

#### *The Sex Variable*

While in college, the 454 women students showed more favor toward Sunday observance than did the 439 men. Fourteen years later, the difference in mean scores had become negligible. However, both sexes had shifted toward more liberal attitudes concerning Sunday observances and these shifts were significant at .01 levels.

TABLE 4  
ATTITUDES TOWARD SUNDAY OBSERVANCE BY TYPE OF INSTITUTION  
(*N* = 893)

Types of Institution	<i>N</i>	1936		1950		Diff.	<i>p</i>	No Shift %	Shift Pro %	Shift Anti %
		Mean	<i>SE</i>	Mean	<i>SE</i>					
4 state univers.	190	5.23	.10	4.84	.13	.39	.01	34	24	42
6 Luth.	359	6.22	.08	5.5	.08	.72	.01	29	19	52
6 other	344	6.00	.08	5.22	.08	.78	.01	27	18	55

### *Attitudes Toward Sunday and Overt Behavior*

We have seen that college attitudes toward the church are related to overt behavior 14 years later as shown by church attendance and tithing. It has also been shown that college tests of attitudes toward Sunday observance are related to retest scores 14 years later ( $r = .43$ ). But are college attitudes toward Sunday related to overt behavior years later? To answer this question, we turn to the correlation between college test scores and participation in church activities. No attempt was made to evaluate or weight such activities. We simply enumerate activities, such as teaching Sunday school, church attendance, service as councilman, or activity in church organizations for men or for women. Between test scores in college and the number of activities in which the ex-student participates 14 years later, we find a small but positive correlation,  $r = .34$ ,  $SE .03$ . Apparently, attitudes toward Sunday measured in college are related to the number of church activities in which the ex-student engages 14 years later.

### V. ATTITUDES TOWARD GOD, A REALITY

#### *Degree of Attitude Change*

Since ex-students 14 years after college testing had changed their attitudes significantly in the prochurch direction, it might be reasoned that this would be accompanied by stronger belief in the reality of God. Support for such an hypothesis is given in Table 5. Both 1936 and 1950 means are well above the midpoint of the scale. This means approving items such as: "I trust in God to support the right and condemn the wrong"; "My faith in God develops with experience";

"I am quite convinced of the reality of God." But by 1950 these ex-students had moved in the direction of attitudes still more favorable toward God. The difference between 1936-1950 means, .21, is significant at the .01 level.

#### *Attitude Shifts*

The tendency toward more theistic attitudes is evident not only from the increased magnitude of the 1950 mean, but also from the number and percentage of ex-students who had shifted toward the theistic end of the scale contrasted with those moving toward atheism. There were 331 ex-students who shifted to attitudes more favorable to a belief in God than they had while in college. During this 14-year period these same Ss shifted significantly toward more liberal views in social and economic

TABLE 5  
ATTITUDES TOWARD GOD AS A REALITY AMONG  
STUDENTS AT 16 COLLEGES AND UNIVERSITIES  
COMPARED WITH THOSE OF THE SAME PER-  
SONS 14 YEARS LATER  
( $N = 863$ )

1936		1950	
Score	<i>f</i>	Score	<i>f</i>
10	14	10	7
9	151	9	186
8	358	8	431
7	221	7	175
6	77	6	24
5	14	5	16
4	12	4	13
3	11	3	7
2	2	2	3
1	3	1	1
Mean	8.06	Mean	8.27
SE	.045	SE	.039

Diff.			.21
<i>p</i> .			.01
<i>r</i> .			.22

Shifts	<i>N</i>	%
No Shift	333	38
Toward God	331	38
Away from God	199	24

TABLE 6  
ATTITUDES TOWARD REALITY OF GOD BY TYPES OF INSTITUTIONS  
( $N=863$ )

Types of Institution	N	1936		1950		Diff.	p	No Shift %	Shift Pro %	Shift Anti %
		Mean	SE	Mean	SE					
4 state univers.	177	7.71	.09	8.02	.08	.31	.01	36	41	23
6 Luth.	356	8.21	.06	8.36	.06	.15	.05	36	37	27
6 other	329	8.09	.06	8.33	.06	.24	.01	43	37	20

areas, as contrasted with the 38 per cent shifting toward belief in reality of God (6). Moving in the opposite or atheistic direction, we find only 24 per cent of the entire group. Approximately 38 per cent retained almost the same position held in college, further evidence of the persistence of college religious attitudes. Persistence of theistic attitudes is further indicated by the correlation,  $r = .22$ , between 1936 test and 1950 retest scores.

#### *Types of Institutions*

When our Ss are analyzed by type of institutions attended, we find students attending denominational colleges significantly more favorable toward belief in reality of God than those who attended the four state universities (see Table 6). But the 1936 differences between Lutheran and the other denominational institutions were not significant. Ex-students from the "other" denominational schools and from the state universities had increased theistic beliefs by magnitudes significant at the .01 level. After 14 years, however, ex-students from Lutheran colleges had increased their means by a margin significant only at the .05 level. From the six "other denominations" came the largest percentage of "standpatters," 43 per cent had not shifted by so much as one scale point, in contrast with 36 per cent of those who had attended state universities or Luth-

eran schools. While the greatest mean change, 1936 to 1950, and the greatest percentage of shifts toward theism were among those who had attended state universities, their 1950 mean did not reach that of the other two groups.

#### *Regional Differences*

While in college, Ss attending institutions in the South had mean scores significantly more favorable toward God, a Reality, than had their colleagues from the North and the Midwest. On the retest in 1950, the attitude differences were still in evidence, in the same direction, but to a lesser degree.

#### *The Sex Variable*

While the study of 3,649 college students in 1936 revealed a significant sex difference in attitude toward God, Reality, .23 ( $p < .01$ ), with females indicating the stronger belief in God, this was less evident in the 1950 retest when women were only slightly higher than men, 8.29 compared with 8.25.

#### VI. ATTITUDES TOWARD GOD, AN INFLUENCE ON CONDUCT

We have seen evidence of a shift in attitudes toward the church and a somewhat stronger belief in the reality of God. But do students believe God influences their own personal conduct? Do such beliefs persist after college? Data

TABLE 7  
ATTITUDES TOWARD GOD AS AN INFLUENCE ON  
CONDUCT AT 16 COLLEGES AND UNIVERSITIES  
COMPARED WITH THOSE OF THE SAME SUB-  
JECTS 14 YEARS LATER  
( $N=851$ )

1936		1950	
Score	<i>f</i>	Score	<i>f</i>
10	85	10	81
9	271	9	333
8	185	8	170
7	110	7	94
6	108	6	100
5	48	5	38
4	14	4	11
3	20	3	15
2	8	2	7
1	2	1	2
Mean	8.21	Mean	8.39
<i>SE</i>	.05	<i>SE</i>	.05

Diff.....	.18
<i>p</i> .....	.01
<i>r</i> .....	.49

Shifts	<i>N</i>	<i>%</i>
No shift.....	272	32
Toward God.....	319	37
Away from God.....	260	31

from tests indicating attitudes toward such intimately personal questions are summarized in Table 7.

#### Degree of Change

That belief in the reality of God would be accompanied by a conviction that God influences conduct might be ex-

pected. Such a hypothesis is indeed supported by the correlation between God-reality attitudes and God-conduct,  $r = .58$ . A marked similarity is also evident in the degree and pattern of 1936-1950 changes. For the 851 students in 1936, the mean, 8.21, indicates attitudes favorable toward the idea of God influencing conduct. By 1950, the God-conduct concept was viewed even more favorably, a change to a mean of 8.39. The 1936-1950 difference of .18 is significant at the .01 level (see Table 7).

#### Attitude Shifts

Of the four measures of religious attitudes, we find on the God-conduct scale the highest correlation between scores in college and those of 14 years later,  $r = .49$ . Further evidence of persistence over the 14 years is noted in Table 7. There were 272 ex-students, nearly one-third of the 851 tested, who had not shifted by so much as one scale point. Of those who did shift, a majority shifted toward the God-conduct end of the scale, 37 per cent compared with 31 per cent who shifted in the opposite direction.

#### Types of Institutions

On the God-conduct scale, institutional differences among collegians were evident in 1936. Students at Lutheran col-

TABLE 8  
ATTITUDES TOWARD GOD AS AN INFLUENCE ON CONDUCT AT DIFFERENT TYPES  
OF INSTITUTIONS  
( $N=851$ )

Types of Institution	<i>N</i>	1936		1950		Diff.	<i>p</i>	No Shift %	Shift Pro %	Shift Anti %
		Mean	SE	Mean	SE					
4 state univ.	177	7.46	.12	8.0	.11	.54	.01	26	46	28
6 Luth.	352	8.42	.08	8.45	.07	.03	*	30	36	34
6 other	322	8.38	.09	8.56	.09	.18	*	37	35	28

\* Not significant.

leges and at "other" denominational schools showed significantly higher means than did those at state universities (see Table 8). But 14 years later, ex-students from state universities had increased their means by a difference of .54 ( $p = .01$ ) in the pro-God-conduct direction. While the two groups of denominational colleges changed in the same direction, in neither case was the 1936-1950 difference significant. As was the case with God-reality, we find that on God-conduct a larger percentage of denominational ex-students tend to retain their original scores than do those from state universities. Among denominational students, 30 to 37 per cent of ex-students showed no shift on retest, compared with only 26 per cent of ex-university students.

When we consider percentages of individuals shifting toward the God-concept, state university ex-students lead with 46 per cent compared with only 35 and 36 per cent in the two other groups. It should be noted, however, that while the ex-university students were the only group to shift significantly toward the religious end of this scale, they did not overtake the other two groups.

#### *Regional Differences*

On initial test, regional differences follow the pattern already noted for God-reality and church. On retest, ex-students from Southern institutions remained significantly more favorable to God as an influence on conduct than did those from northern colleges.

#### *The Sex Variable*

As a group, the 438 women scored higher than men during college and also on the postcollege retest. But the 413 males shifted farther toward the God-

conduct belief, hence the 1950 sex difference decreased.

#### *Attitudes Toward God-Conduct and Overt Behavior*

While in college these S's indicated belief in God as an influence on conduct, and such belief has persisted through the 14 years following the college tests. But is there any relationship between the belief in college and postcollege conduct?

If belief in God does influence conduct, we might expect evidence from the religious activities in which the ex-student participates. Between college scores on God-conduct attitudes and report of church activities 14 years later, we find a positive correlation ( $r = .42$ ,  $SE .02$ ). Those Ss who scored high in college tend to be the ones who 14 years later taught Sunday school, participated in church brotherhoods and missionary organizations, and were members of church governing bodies. Those scoring low in college tend to participate in few or none of such church activities.

But what of behavior in community and civic areas? Between college scores on the God-conduct scale and such community activities as participation in community-chest drives, work in welfare organizations, and general civic enterprises, the correlation is positive and significant ( $r = .36$ ,  $SE .03$ ). What a college student believes about the influence of God on conduct is even related, though not strongly, to the percentage of times he votes in state and national elections 14 years later ( $r = .23$ ,  $SE .03$ ).

While not great enough for prediction, all correlations presented are positive and sufficiently large compared with the  $SE$ 's to sustain the hypothesis that attitudes toward religious values in college

are related to report of overt behavior at least 14 years later.

# VII. RELIGIOUS ATTITUDES AND CERTAIN RELATIONSHIPS

## *Consistency in Religious Attitudes*

In three of the four measures of religious attitudes we have considered, certain similarities in pattern have been observed. The changes in means from 1936 test to 1950 retest have been somewhat similar for attitudes toward the church, God-reality, and God-conduct. One might expect attitudes favorable to God-conduct concepts to accompany acceptance of God-reality items. This was supported not only by the pattern of shifts shown previously but also by the correlation,  $r = .58$  (see Table 9). We find similar consistency between God-conduct and church,  $r = .62$ , and between God-reality and church,  $r = .51$ . These intercorrelations, all above .50 and significant, indicate marked consistency in attitudes. The fact that the correlations are not higher suggests that the tests measure attitudes which are by no means identical. Conceivably, Ss may accept the reality of God but not go so far as to admit that the existence of God actually influences personal behavior. That the highest intercorrelation ( $r = .62$ ) should be between God-conduct and the church

seems not illogical. The purpose of the church is to foster a belief in God. The Ss who believe God influences conduct might be expected to be favorable to the institution designed to promote godly conduct.

While intercorrelations between God-reality, God-conduct, and the church are all above .50, indicating marked consistency, the correlations between each of these and Sunday observance are significantly lower. Between Sunday observance and church, God-conduct, and God-reality, the  $r$ 's are .36, .31, .27, respectively. While the latter three apparently have a large factor in common, Sunday observance may involve other factors such as social and economic considerations in addition to the commandment to "remember the Sabbath day. . ."

## *Conservatism and Religious Attitudes*

Do Ss who indicate attitudes favorable toward religious values also tend to be conservative on social, economic, and political issues (5, 6)? Is the frequent listing of religion as a "conservative force" an unjustified stereotype (11)? For answers to such questions, we turn to data from the Lentz Opinionnaire, which was included in both test and retest in this study (6). High scores on this test indicate conservatism—low scores show liberal or radical tendency. That Ss favor-

TABLE 9  
INTERCORRELATIONS BETWEEN ATTITUDES OF EX-STUDENTS\*

Attitudes toward	N	God-reality	God-conduct	Church	Sunday	CR
God-reality	863	—	.58	.51	.27	.24
God-conduct	851	.58	—	.62	.31	.30
Church	887	.51	.62	—	.36	.44
Sunday obs.	893	.27	.31	.36	—	.43
CR	901	.24	.30	.44	.43	—

\* All correlations shown are from 6 to 30 times SE.



TABLE 10  
COMPARISON OF ATTITUDE CHANGES AND NET SHIFTS OVER 14 YEARS

Scale	Direction of change	1936-1950 change in mean scores	1936-1950 Net shifts* %
Church <i>N</i> = 887	Prochurch	.30	20
God-reality <i>N</i> = 863	Toward God-reality	.21	14
God-conduct <i>N</i> = 851	Toward God-conduct	.18	16
Sunday <i>N</i> = 893	Pro-Sunday observance	-.67	-31
<i>CR</i> <i>N</i> = 901	Soc.-Pol. conservatism	-1.72†	-20

\* "Net Shifts" = % shifting toward a value, less % shifting against.

† The magnitude of the *CR* change is not directly comparable with the change in religious means.

able toward religious values are conservative in other areas would seem apparent from the *CR* column, Table 9. This seems most obvious in correlations between conservatism and the church,  $r = .44$ , and between conservatism and Sunday observance,  $r = .43$ . Might relatively high correlation between attitudes toward civic conservatism and attitudes toward the church be explained in terms of the primary function of the church, viz., to perpetuate a heritage of religious values? Perhaps conserving of religious values has spread to other areas as well. The question of including Sunday observance as one of the religious scales has already been raised. Perhaps between Sunday observance and conservatism-radicalism tests there are more factors in common than between Sunday and the other religious scales. Note that between Sunday and political-social conservatism the correlation is  $r = .43$ , a greater correlation than between Sunday and any of the other religious scales. From the foregoing correlations it would seem that *Ss* who score high on religious scales also have a slight tendency to score high on social-economic-political conservatism. But these correlations portray only a

static situation at time of testing or re-testing. What of the dynamic aspect with which this entire study has been primarily concerned?

A comparison of mean changes in religious attitudes with those in social-political-economic areas is shown in Table 10. For 3 of the 4 religious attitude areas, church, God-reality, and God-conduct, the mean changes were all toward the religious end of the scale and all changes were significant. But for the same *Ss*, the mean change in social-political-economic attitudes was toward less conservatism. For the three major areas, net shifts toward religious values range from 14 per cent to 20 per cent. On the other hand, for the entire group, the 14 years saw a net shift of 20 per cent away from conservatism, toward liberal attitudes. Again we see Sunday-observance attitude changes and net shifts in the liberal direction, in contrast to the other religious areas.

#### *Attitudes in 1936 and Overt Behavior in 1950*

For convenient comparison, correlations between student attitudes in college and various kinds of behavior 14 years

TABLE 11  
ATTITUDES IN COLLEGE AND OVERT BEHAVIOR 14 YEARS LATER

Attitudes in college 1936	Overt behavior 1950	<i>r</i>	<i>SE</i>
God-conduct	Religious activities	.42	.02
God-conduct	Civic activities	.36	.03
God-conduct	% of time voting	.23	.033
Sunday observance	Religious activities	.34	.03
Church	% Church attendance	.25	.04
Conservative-radical	Civic activities	.012	.026*
Conservative-radical	% of time voting	.05	.05*

\* Not significant.

later are summarized in Table 11. It will be noted that college attitudes toward the church, (in 1936) are correlated with church attendance in 1950,  $r = .25$ ,  $SE .04$ . Attitudes toward Sunday observance expressed in college are correlated with report of participation in religious activities 14 years later,  $r = .34$ ,  $SE .03$ . Attitudes toward God as an influence on conduct show an even higher correlation with participation in religious activities,  $r = .42$ ,  $SE .02$ . Thus religious attitudes indicated in college are significantly correlated with religious activities 14 years later. God as an influence on conduct is also related to participation in civic activities,  $r = .36$ ,  $SE .03$ . This is in sharp contrast to the correlation between conservatism toward political issues expressed in college and participation in civic activities 14 years later,  $r = .012$ ,  $SE .026$ , not significant. While we found God-conduct attitudes correlated with percentage of time voting,  $r = .23$ ,  $SE .03$ , conservative-radical test results in college show no such significant correlation with percentage of time voting,  $r = .05$ ,  $SE .05$ .

Thus it is apparent that college religious attitudes are significantly related to certain types of religious and civic behavior reported 14 years later. On the other hand, college conservatism or liberalism on social-political-economic issues

bear no significant relationship to these same activities.

#### VIII. SUMMARY

1. A general pattern of attitude change toward religion was discernible 14 years after college testing. In three of the four areas studied, retest means were significantly greater than college test means. This proreligious trend was further supported by data on individual shifts: (a) Toward the church, 35 per cent came to look with more favor, 14 per cent less. (b) Toward God-reality, 38 per cent came to look with more favor, 24 per cent less. (c) Toward God-conduct, 37 per cent came to look more favor, 31 per cent less.

2. In sharp contrast, toward Sunday observance, both means and percentages of shifts indicated attitudes significantly less appreciative than while in college.

3. That religious attitudes held in college tend to persist for at least 14 years is supported in all areas of this study. The following evidence was presented: (a) Of more than 850 ex-students, 29 per cent to 51 per cent did not show a test-retest attitude change of so much as one scale point. (b) Persistence was indicated by the test-retest correlations ranging from .22 to .49 (all correlations significant).

4. The pattern of institutional differences in religious attitudes became less

evident after the 14-year period. Students at state universities in 1936 indicated attitudes less religious than did those at denominational colleges. But ex-students from state universities shifted further toward religious attitudes, so that by 1950 the difference between the two types of institutions was reduced.

5. The regional pattern of 1936 indicated that students in the South were more religious than those of the North and the Midwest. After 14 years, regional differences had declined, with ex-students from the South still indicating the more religious attitudes.

6. On the sex variables, we again see the pattern of decreased differences after 14 years. In 1936 the coeds were more religious than men, but by 1950 sex differences had declined and in no area were they significant at the .01 level.

7. Marked consistency in religious attitudes was indicated by the intercorrelations between God-reality, God-conduct, and the church, all  $r$ 's above .50.

8. Sunday observance apparently involves less of the religious component

common to the other three areas. While intercorrelations between the other three religious areas were all above .50, intercorrelations between Sunday observance and the other three were all below .36. "Net shifts" of attitudes toward Sunday observance were in the direction opposite that of the other three areas.

9. That the attitude toward Sunday observance may be more closely related to conservatism on social-economic-political issues is suggested by a correlation greater than between Sunday observance and each of the other three religious areas.

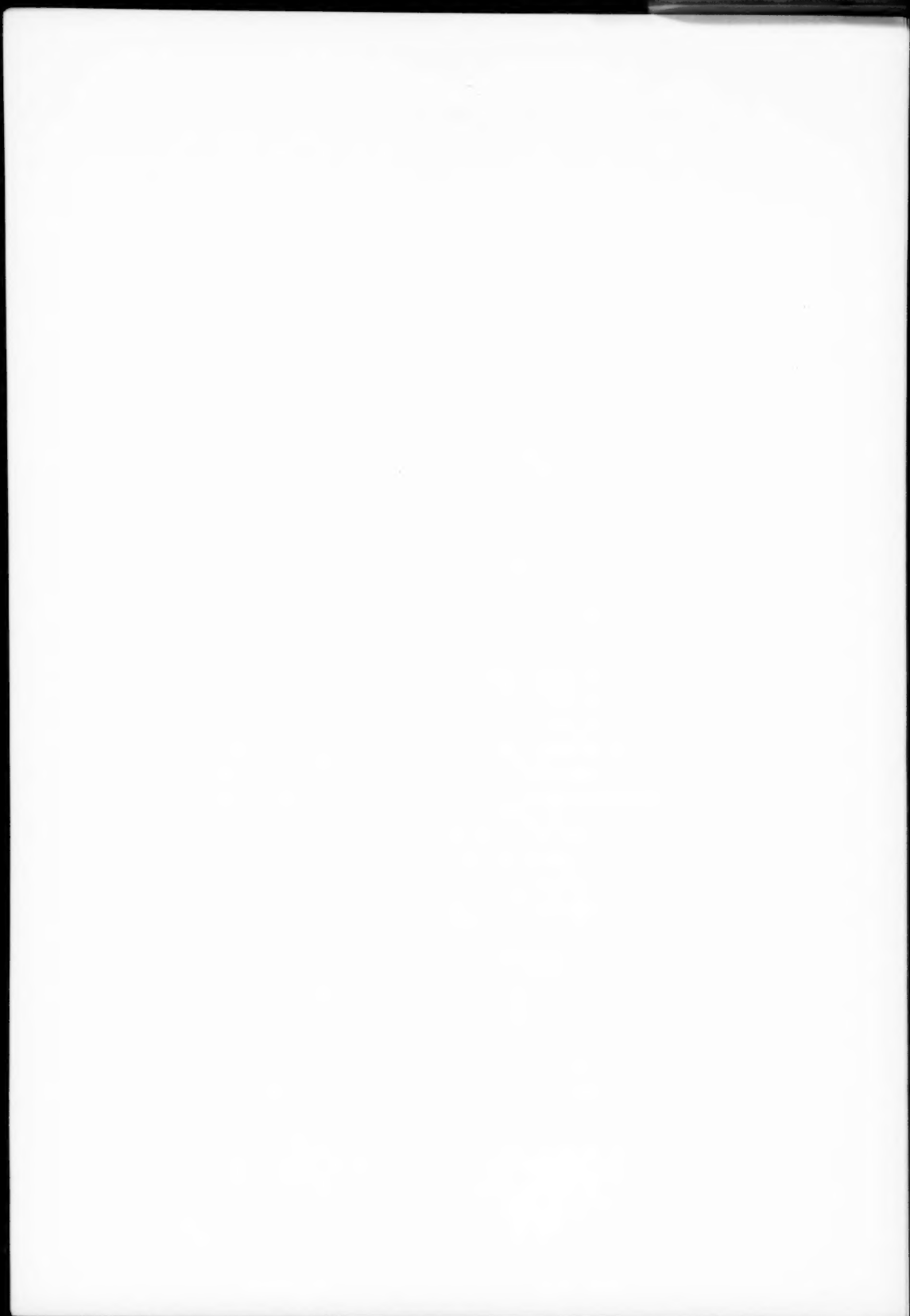
10. While changes in means, for the most part, were toward proreligious attitudes, in social-economic-political areas the mean changes were toward liberalism.

11. That what an  $S$  believes in college is related to overt behavior 14 years later was indicated by significant correlations between college attitude scores and such postcollege reports of behavior as church attendance, participation in other religious activities, tithing, civic activities, and percentage of times voting in state and national elections.

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